

# NEVARC NEWS

Incorporated in Victoria, 2014, Registration Number: A0061589C

The monthly magazine of the

North East Victoria Amateur Radio Club

<http://nevarc.org.au/>



An affiliated club of the Wireless Institute of Australia

Volume No: 06

Issue 3

March

2019



Next Club Meeting  
Sunday 10<sup>th</sup> March

Belviour Guides Hall, 6 Silva Drive West Wodonga

Bring your radio day

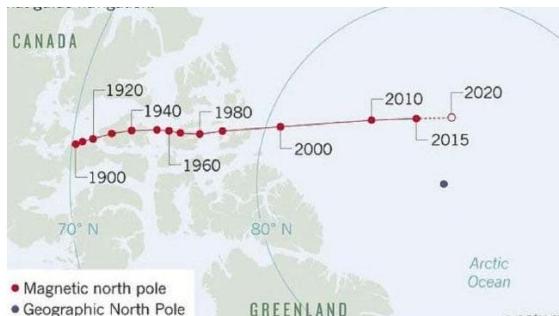
Gary, Brenton & Matt will have test gear set up, to show how it all works and we can put a few radios through their paces...

We will have:

Service monitors, Spectrum analysers and antenna analysers

John Moyle Memorial Field Day 16-17 March 2019  
NEVARC are in the contest this year - see page 4

Congratulations to Tom VK3NXT who was elected as NEVARC Vice president last meeting



On the move, the magnetic north pole recently crossed the International Date Line

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# EMDRC Hamfest 2019

Sunday 24 March 2019

Great Ryrie Primary School  
51A Great Ryrie Street, Heathmont, Victoria

[www.emdrc.com.au](http://www.emdrc.com.au) [www.facebook.com/vk3er](https://www.facebook.com/vk3er)

\$6pp including one Raffle ticket and bottomless tea & coffee.

Doors open at 10 am.

Breakfast and morning tea available  
at the famous BBQ.

For Event Information or Table  
Bookings please visit the club website  
[www.emdrc.com.au](http://www.emdrc.com.au) or email the  
committee [vk3er@emdrc.com.au](mailto:vk3er@emdrc.com.au)

Commercial and second hand traders,  
new & used bargains, Raffle prizes  
donated by our commercial traders,  
raffle drawn 12 noon.

Plenty of space for a chat with old and  
new friends.



[Radiobooks.com.au](http://Radiobooks.com.au)



## VK3RTV Amateur Television Repeater Update

We are now into February and the renovation of Surrey Hills is well under way. Phil VK3GMZ reports.. 'lots of people with hard hats and the old being replaced by the new'. We believe that access will be restored later in March with a bit of luck.

Because we will need to operate in a closed secure rack, I have upgraded the fan supply to our 500 watt final amplifier. Two tangential fans sound a bit like a jet engine if operate off 50V. I have throttled them back to run on 24V which supplies a very adequate amount of air with a lower level of sound.

While the final amplifier is a double MOSFET designed for digital linear operation, the RF output we can achieve is about 100 watts without significant growth of intermodulation products. The power level is what I read on a Revex SHF through line meter and is not the true power of the DVB-T signal. With the inclusion of the filter funded by AR Victoria and the Eastern and Mountain Districts Radio Club the output is now clean enough to operate in this new metropolitan site.

I have grandfathered off the digital video machine that operates from a hard disc running its own software. This machine produced the VK3RTV callsign and other video files. The machine can be controlled via an RS 232 port or Ethernet. You load MPEG2 files on to the hard disc in numerical order and then execute very simple commands to run a specific file. The boot up file will be named 'vid 00000'. The output is line video and two channel audio which can be fed directly into a DATV exciter. It is a single 19" rack type enclosure.

If anyone would like the machine it is available for a very nominal donation to the 'VK3RTV Fund'. Give me a call on 9801 2778; I have all the details on programming the files and spare hard discs.

The replacement for this machine is a Mini Media Box, the video files running from a USB Stick. There will be new dynamic graphics for the callsign ID etc. The output frequency will be 445.5 MHz as was the case for the week long test period last year. Since then I have changed the DVB-T modulation from QAM16 to QPSK which will give us about 7dB Carrier to Noise (C/N) factor improvement over QAM16. This will give the signal significantly more reach than was the case for the test which ran QAM16. If you received the test signal I think the Set Top Boxes will decode the QPSK with no action from you. If this is not the case then delete your current setting and re-scan for the new one, still with a frequency of 445.5 MHz.

The initial up link frequency will be 1255 MHz DVB-S, Symbol Rate 3.5 Ms/s, FEC ¾. as it was for the test. The reason for the reduced Symbol Rate is to improve the power bandwidth of the uplink signals. At 5 Ms/s the bandwidth was about 6.5 MHz, at 3.5 Ms/s the bandwidth is about 4.6 MHz.

The plan is the install in to Surrey Hills first as the primary site. I am hopeful that Mount View will be able to be used as an alternate method of access after we bed down Surrey Hills.

Regards Peter, VK3BFG

# Congratulations to UTAS/AMC - A Great Opportunity

The WIA congratulates the University of Tasmania and Australian Maritime College (AMC) in being selected by the ACMA as the preferred provider for the delivery of amateur radio examination, callsign management and associated services. See [Link](#) for details of the ACMA announcement.

The WIA board views this as a watershed moment in the history of amateur radio in Australia. The expedient delivery of these services by a skilled team backed by a sandstone university promises to deliver a robust, cost-effective and efficient qualification service for the Australian amateur community.

It is the view of the WIA board and the WIA Education Group that anything other than a smooth transition to the AMC will damage the already fragile amateur radio community. For this reason, the WIA and ACMA met in October last year to begin planning for this potential eventuality. We are committed to ensuring that the WIA does not cause any obstruction to this process.

The WIA National Office is in the process of transferring all callsign applications, assessments and other activities that were in progress on Friday the 1st of February, 2019 to the ACMA.

The WIA sincerely thanks all WIA volunteers, assessors and learning facilitators that have been involved in the previous examination systems over the past 20+ years for their incredible contribution to the hobby of amateur radio.

There will be changes and uncertainty in the near term. To ensure a smooth transition and continuity of services for this great hobby the WIA will work collaboratively with the AMC and trust you will as well.

It is the view of the WIA Board, the WIA education group and many members we have spoken to that the transition to the AMC will allow the WIA to re-focus its resources on delivering all of the objects of Institute.

The WIA has a 100 year plus legacy of serving the amateur community. It will continue to do so into the future with your support.

For those that are unaware, the objects for which the Institute was established are:

- to promote, advance and represent in any way it thinks fit Amateur Radio and the interests of Radio Amateurs, and without limiting the generality of the forgoing,
- to protect and enhance the privileges of Radio Amateurs,
- to encourage an awareness of the value of Amateur Radio,
- to educate and encourage potential Radio Amateurs,
- to represent Radio Amateurs both nationally and internationally,
- to provide services for Radio Amateurs and those interested in Amateur Radio,
- and to do all other lawful things as are incidental or conducive to the attainment of these objects or any of them or which may be calculated to advance directly or indirectly the interests of the Institute.

There are a number of exciting initiatives that are being delivered by the WIA:

The IT Team have been working on an initiative to provide enhanced email (and other services) to members during the month of March. All members (and some former members) will receive an email on this matter.

For further information, please email Joseph and his team at [it@wia.org.au](mailto:it@wia.org.au).

As you are no doubt aware the WIA sent a delegation to the region 3 International Amateur Radio Union (IARU) conference to represent VK last year. The minutes of this conference have recently been released and are available on the WIA Website [Link](#). The IARU represents the amateur community to the ITU (International Telecommunications Union) for the Radio Amateur service and RF spectrum.

Club presidents of affiliated clubs should expect an email explaining the WIA club grants program for affiliated clubs. This program will allow WIA affiliated clubs to receive grants from the WIA to assist in the delivery of the WIA's objects. The Education Group, having finished the ATM, are now moving towards syllabus review and have asked for any parties who wish to take part in this process email [education@wia.org.au](mailto:education@wia.org.au) .

In addition to these activities, there is a pipeline of other member services that will be released over the next few months. If you have a suggestion for a service or service improvement that you would like the WIA to deliver, please email [support@wia.org.au](mailto:support@wia.org.au)

*~From WIA NEWS & WIA Website*

# NEVARC - John Moyle Memorial Field Day 2019

NEVARC is entering the John Moyle Memorial Field Day this year, the exact hilltop decided at next meeting. We are entering the 6 hour section, Multi Operator, using the club station call.

If you're about on air that weekend listen out for VK3ANE and work us!

But if you want to join the NEVARC crew going portable, please contact

Club President, Gary at [president@nevarc.org.au](mailto:president@nevarc.org.au)

At the March 10<sup>th</sup> club meeting plans will be discussed, so come along and see what's involved and nominate yourself and a friend to operate for 6 hours on a band that you're good at and have the portable gear for.

BYO all radio gear and antennas, masts. A portable 240v generator will be on site, but bring power boards and extension leads. Only deemed serviceable good condition mains cables allowed on site. If you have your own battery power by all means bring that instead. The preparation list on page 6 is a good reference to start.

## Contest History

The contest is run each year in memory of the late John Moyle who was a long term editor of the Wireless Weekly, (later Radio & Hobbies - later Radio Television & Hobbies) from 1947 until his untimely death in 1960.

He served in the RAAF with distinction and was responsible for a number of innovative solutions to keeping radio and radar equipment working under difficult wartime and working conditions.

The WIA decided that a suitable long term memorial to John Moyle would be a Field Day with a focus on portable or field operation. The contest has been conducted annually ever since.

The rules of the contest have gradually changed over time and are still revised regularly.

The contest is still for portable or field operators, though Home stations can of course take part using a different scoring system.

Though Multiple Operators and club stations are actively encouraged to take part in the contest they are not competing against the single operator stations and in effect there are two separate contests run at the same time. Hence single operator stations take part in their own contest against other single operators.

## Upcoming Contest Date & Time

The next Field Day will be held over the weekend of the 16th-17th March 2019 and will run from UTC 0100 on the Saturday to 0059 on the Sunday.

## Contest Rules

See <http://www.wia.org.au/members/contests/johnmoyle/> for full details

## Aim Of The Contest

The aim is to encourage and provide familiarisation with portable and field operation, and provide training for emergency situations. The rules are therefore specifically designed and focussed to encourage field operations.

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## Upcoming Contest Date & Time

Field Day will be held over the weekend of the 16th-17th March and will run from UTC 0100 on the Saturday to 0059 on the Sunday.

# JMFD CALLING FREQUENCIES

**6m FM 52.525 MHz (prim.), 53.500 MHz**

**6m SSB 50.150 MHz, 50.200 MHz**  
**(no contest operation allowed below 50.150 MHz)**

**2m SSB 144.100 MHz (prim),  
144.200 MHz (secondary),  
144.300 MHz (chat).**

**2m FM 146.500 MHz,  
146.450 MHz,  
146.550 MHz  
(+/- 25kHz channels)**

**70cm SSB 432.100 MHz (prim),  
432.200 MHz (sec),  
432.300 MHz (chat)**

**70cm FM 439.000 MHz (prim) and +/-25kHz channels**

**23cm SSB 1296.100 MHz (prim),  
1296.200 MHz (sec)**

**23cm FM 1294.000 MHz (prim)**

**Activity is spread across each of the HF bands without any specific call frequencies.**

# **Field Day Preparation Checklist**

# **Field Day Preparation Checklist**

## Miscellaneous/Tools

# **Field Day Preparation Checklist**

## **Personal/Lodging**

### **Suggested Instructions for use of this list:**

HAVE LOCATION STAGED LOADED

## Getting Started:

|  |   |  |  |
|--|---|--|--|
| /  | <<<<<<< When you have acquired the Item put an "/" here |  |  |
| /  | Garage  | <<<<<< Where you have it stored goes here. |  |
| When you have it ready to go for Field Day, put an "/" here                      | >>>>>>>>  | /  |  |
| When you have physically loaded it in the car or on the trailer, put an "/" here | >>>>>>  | /  |  |

# After Field Day

|  |   |      |   |   |
|--|---|------|---|---|
| When you have prepared (repacked) the item, put an "\" here >>>>>>>>>              |   | X    |   |   |
| When you have loaded the item into your vehicle/trailer, put an "\" here >>>>>>>>> |   |      | X |   |
| X  | <<<<<<<< When you have unloaded the item at home, put an "\" here |      |   |   |
| Done! The item is back where you stored it and it is ready for the next Field Day. |   |      |   |   |
| X  | Garage  | Item | X | X |

# *A little bit of Aussie culcha.....*

**LOG ON** Adding wood to make the barbie hotter.

**LOG OFF** Not adding any more wood to the barbie.

**MONITOR** Keeping an eye on the barbie.

**DOWNLOAD** Getting the firewood off the Ute.

**HARD DRIVE** Making the trip back home without any cold tinnies.

**KEYBOARD** Where you hang the Ute keys.

**WINDOW** What you shut when the weather's cold.

**SCREEN** What you shut in the mozzie season.

**BYTE** What mozzies do.

**MEGABYTE** What Townsville mozzies do.

**CHIP** A bar snack.

**MICROCHIP** What's left in the bag after you've eaten the chips.

**MODEM** What you did to the lawns.

**LAPTOP** Where the cat sleeps.

**SOFTWARE** Plastic knives & forks you get at Red Rooster.

**HARDWARE** Stainless steel knives & forks from KMart.

**MOUSE** The small rodent that eats the grain in the shed.

**MAINFRAME** What holds the shed up.

**WEB** What spiders make.

**WEBSITE** Usually in the shed or under the verandah.

**SEARCH ENGINE** What you do when the Ute won't go.

**CURSOR** What you say when the Ute won't go.

**YAHOO** What you say when the Ute does go.

**UPGRADE** A steep hill.

**SERVER** The person at the pub who brings out the counter lunch.

**MAIL SERVER** The bloke at the pub who brings out the counter lunch.

**USER** The neighbour who keeps borrowing things.

**NETWORK** What you do when you need to repair the fishing net.

**INTERNET** Where you want the fish to go.

**NETSCAPE** What the fish do when they discover the hole in the net.

**ONLINE** Where you hang the washing.

**OFFLINE** Where the washing ends up when the pegs aren't strong enough.

# Earth May Lose its Distinct Blue Colour in Another 80 Years



Owing to climate change surface of the oceans will change colour by end of 21st century leading our blue planet to look visibly altered, finds a new study from the Massachusetts Institute of Technology (MIT).

The findings showed that climate change has been significantly affecting phytoplankton -- the tiny sea creatures -- in the world's oceans, which will lead to the change in colour -- intensifying its blue and green regions.

"There will be a noticeable difference in the colour of 50 per cent of the ocean by the end of the 21st century," said lead author Stephanie Dutkiewicz, a principal research scientist at MIT.

"It could be potentially quite serious. Different types of phytoplankton absorb light differently, and if climate change shifts one community of phytoplankton to another, that will also change the types of food webs they can support," Dutkiewicz added.

The study said the blue regions, such as the subtropics, will turn shades darker, reflecting even less phytoplankton -- and life in general -- in those waters.

Some regions that are greener now, such as near the poles, may turn a deeper hue, as warmer temperatures brew up more diverse phytoplankton.

The study reported in the journal Nature Communications said climate change was already changing the makeup of phytoplankton, and by extension, the colour of the oceans and the colour of the blue planet.

The oceans appear blue because water molecules alone absorb almost all sunlight except for the blue part of the spectrum, but with any organism in the ocean, phytoplankton for instance, the pigment in it will absorb less in the green portions and reflect more green light.

For the study, the researchers developed a global model that simulates the growth and interaction of different species of phytoplankton.

When they increased the global temperatures by up to 3 degrees Celsius by 2100, they found that wavelengths of light in the blue or green wave band responded the fastest.

Dutkiewicz observed that this blue or green wave band showed a very clear signal, or shift, due specifically to climate change.

*~Internet*

Here's a helpful guide to understanding what politicians are really saying

**Gimmick** Popular idea we wish we'd thought of.

**I'm not justifying it,** I'm explaining it I'm justifying it.

**I'm sorry, but ...** I'm not sorry, and ...

**I'm sympathetic to that proposal** I feel sorry for it, because it's doomed.

**Ideological** Someone with fixed ideas whom we dislike. If we do like them, try "committed".

**Idly by** The manner in which people with whom you disagree are standing, a stance you typically cannot manage.

**Ilk** People standing near someone we dislike.

**Industrial** The scale on which bad things have been happening.

**Passionate** The standard unit of interest in a subject. As in this IBM job ad: "The ideal developer will be passionate about cloud computing."

**Per se** Ignore what I just said. As in, "We have no plans, per se" – in other words, we have plans.

**Misguided** Their intentions are good, but they are idiots.

**Technocrat** Someone who understands the subject, but whom I wish you to ignore. Antonym: "independent expert".

**Too little, too late** The quality of our opponents' proposals when they are in serious danger of being popular.

**Unfettered** A good way of making something that people might otherwise be in favour of, such as capitalism or globalisation, sound like a dangerous thing.

**We must focus on the immediate issue** And not the thing you keep asking about.

**We need to look more widely** Until we find some evidence that supports my conclusions.

**We rule nothing out** We are ruling lots of things out, including the thing you just said, but this isn't the moment to tell you.

**Worrying** The nature of a report that makes no specific criticisms. If it is a long report, try "extremely worrying". If it actually is worrying, use "disturbing".

**Zealot** One who strongly holds views different from my own strongly held views.

# World Magnetic Model Out-of-Cycle Release

Earth's northern magnetic pole is moving quickly away from the Canadian Arctic toward Siberia. This movement has forced NCEI's scientists to update the World Magnetic Model (WMM) mid-cycle.

Typically, a new and updated version of the WMM is released every five years. With the last release in 2015, the next version is scheduled for release at the end of 2019. Due to unplanned variations in the Arctic region, scientists have released a new model to more accurately represent the change of the magnetic field between 2015 and now.

This out-of-cycle update before next year's official release of WMM2020 will ensure safe navigation for military applications, commercial airlines, search and rescue operations, and others operating around the North Pole.

## Uses of the WMM

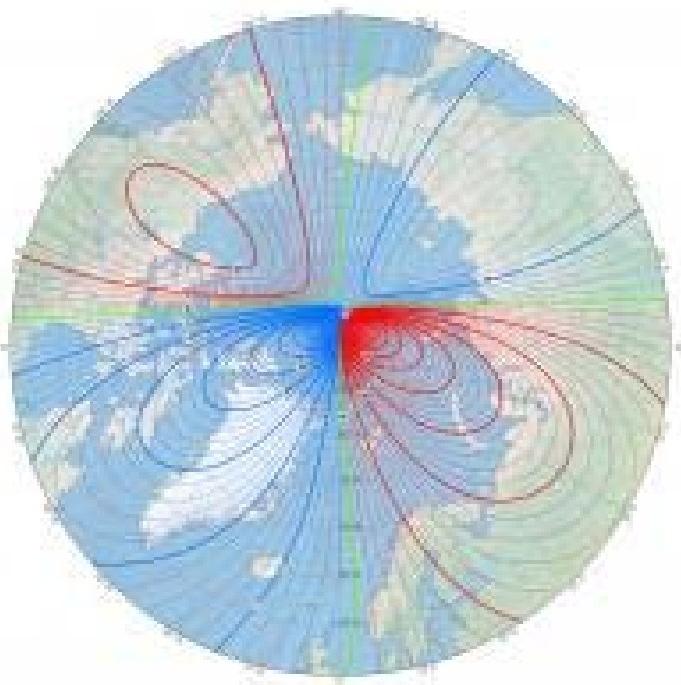
The military uses the WMM for undersea and aircraft navigation, parachute deployment, and more.

Other governmental organizations, such as NASA, the Federal Aviation Administration, U.S. Forest Service, and many more use this technology for surveying and mapping, satellite/antenna tracking, and air traffic management.

Smartphone and consumer electronics companies also rely on the WMM to provide consumers with accurate compass apps, maps, and GPS services.

Airport runways are perhaps the most visible example of a navigation aid updated to match shifts in Earth's magnetic field. Airports around the country use the data to give runways numerical names, which pilots refer to on the ground.

"The declination has changed just over 2.5 degrees over the past 22 years since Denver opened," Heath Montgomery, the international airport's former spokesperson, said after the last update.



This map shows the location of the north magnetic pole (white star) and the magnetic declination (contour interval 2 degrees) at the beginning of 2019. Courtesy of NOAA NCEI/CIRES.

Compasses use declination (the difference between true north and where your compass points) to help correct navigation systems for a wide variety of uses. As Earth's magnetic field evolves between the 5-year release schedule of the WMM, these predicted values can become off as the rate of change in Earth's magnetic field evolves due to unpredictable flows in Earth's core. The north polar region is experiencing one of these erratic changes.

<https://www.ncei.noaa.gov/>

# NEVARC Nets

## 40M Net

Monday, Wednesday and Fridays  
10am Local time (East coast)

**7.095 MHz LSB**

Hosted by Ron VK3AHR

## 80M Net

Wednesday 20:30 Local time

**3.622 MHz LSB**

Hosted by Ron VK3AHR  
Using the club call VK3ANE

## 2M Nets

Monday at 2000 local time on  
VK3RWO repeater  
**146.975 MHz**

President, VK2VU, Gary  
Vice President, Tom VK3NXT  
Secretary, VK2FKLR, Kathleen  
Treasurer, Amy



## NEVARC CLUB PROFILE

### History

The North East Victoria Amateur Radio Club (NEVARC) formed in 2014.  
As of the 7th August 2014, Incorporated, Registered Incorporation number A0061589C.  
NEVARC is an affiliated club of the Wireless Institute of Australia.

### Meetings

Meetings details are on the club website, the Second Sunday of every month, check for latest scheduled details.  
Meetings held at the Belvoir Guides Hall, 6 Silva Drive West Wodonga.  
Meetings commence with a BBQ (with a donation tin for meat) at 12pm with meeting afterwards.  
Members are encouraged to turn up a little earlier for clubroom maintenance.  
Call in Via VK3RWO, 146.975, 123 Hz tone.

### VK3ANE NETS

#### HF

7.095 MHz Monday, Wednesday, Friday - 10am Local time  
3.622 MHz Wednesday - 8.30pm Local time

#### VHF

VK3RWO Repeater 146.975 MHz – Monday - 8pm Local time  
All nets are hosted by Ron Hanel VK3AHR using the club callsign VK3ANE

### Benefits

To provide the opportunity for Amateur Radio Operators and Short Wave Listeners to enhance their hobby through interaction with other Amateur Radio Operators and Short Wave Listeners. Free technology and related presentations, sponsored construction activities, discounted (and sometimes free) equipment, network of likeminded radio and electronics enthusiasts. Excellent club facilities and environment, ample car parking.

**Website:** [www.nevarc.org.au](http://www.nevarc.org.au)

**Postal:** NEVARC Secretary  
PO Box 69  
Wahgunyah Vic 3683

All editors' comments and other opinions in submitted articles may not always represent the opinions of the committee or the members of NEVARC, but published in spirit, to promote interest and active discussion on club activities and the promotion of Amateur Radio. Contributions to NEVARC News are always welcome from members.

Email attachments of Word™, Plain Text, Excel™, PDF™ and JPG are all acceptable.

You can post material to the Post Office Box address at the top of this page, or email [magazine@nevarc.org.au](mailto:magazine@nevarc.org.au)

Please include a stamped self-addressed envelope if you require your submission notes returned.

Email attachments not to exceed 5 Mb in file size. If you have more than 5 Mb, then send it split, in several emails to us.

Attachments of (or thought to be) executable code or virulently affected emails will not be opened.

Other persons or radio clubs may edit or copy out such as they like from the magazine but a reference to NEVARC News is appreciated, except copyrighted (©) material or as otherwise indicated.

Other articles credited to outside sources should ask for their permission if they are used.

While we strive to be accurate, no responsibility taken for errors, omissions, or other perceived deficiencies, in respect of information contained in technical or other articles.

Any dates, times and locations given for upcoming events please check with a reliable source closer to the event.

This is particularly true for pre-planned outdoor activities affected by adverse weather etc.

The club website <http://nevarc.org.au/> has current information on planned events and scheduled meeting dates.

You can get the WIA News sent to your inbox each week by simply clicking a link and entering your email address found at [www.wia.org.au](http://www.wia.org.au). The links for either text email or MP3 voice files are there as well as Podcasts and Twitter. This WIA service is FREE.